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[Continued on next page]

(54) Title: COMMUNICATION SYSTEM
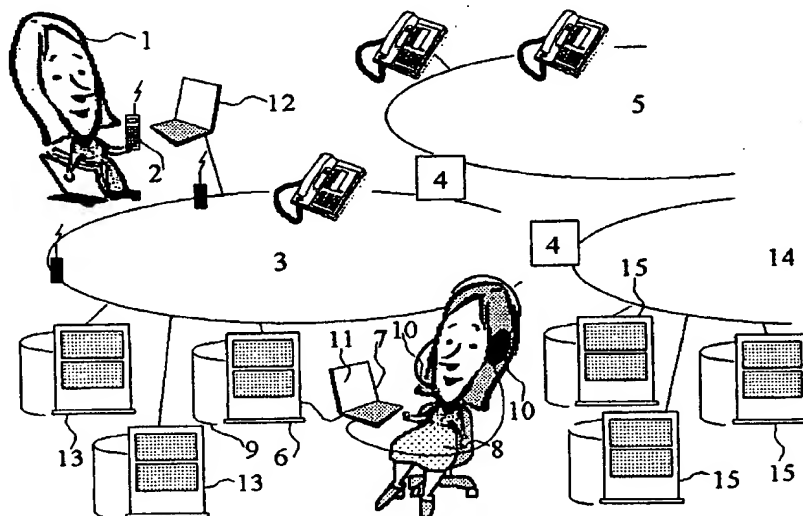
(57) Abstract: Communication system comprising user terminals (2, 12) operable by users (1) and connecting means (3). Connected to a "personal assistant" server (6) is a terminal (7), operated by a human "personal assistant" (8) who can be called up by users to provide information or offer other services. The server (6) is connected to a users database (9) containing user-specific data and settings, whereby the server, on detection of a call from a user terminal (2, 12) to the "personal assistant" terminal (7), reads out the data and settings of the calling user from the database. The server (6) is connected to internal or external data systems (13, 15), which are accessible and operable by the "personal assistant" terminal (7) with control by user data and settings called up from the users database (9). The data systems can be an e-mail system, a diary system, internal or external information systems, an SMS system, a fax system, a unified messaging system, etc.

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Communication system

FIELD OF THE INVENTION
The invention relates to a communication system comprising
5   user terminals operable by users and connecting means for
connecting the user terminals to a telecommunications
network. The user terminals referred to below can include
to be voice terminals.

10   BACKGROUND OF THE INVENTION
A communication system of this kind is generally known as a
private or public telephony system. The object of the
present invention is to provide a system by which
personified and personal assistance is offered to a user,
15   which in fact amounts to a personal secretary function and
which is intended especially for business and small-
business use and is particularly well suited for
teleworking "communities", etc. In contrast with a number
of known systems, the present system does not, in
20   principle, make use of "voice response" or "voice
recognition" etc., but uses a human "personal assistant" or
"operator" with sufficient resources at his or her disposal
to offer very efficient personal help to a variety of
users.
25

SUMMARY OF THE INVENTION
The communication system according to the invention
comprises a "personal assistant" server connected to the
connecting means, to which server a "personal assistant"
30   terminal is connected, which can comprise a voice part and
a data part and which can be operated by a human "personal
assistant" who can be called up by the users via the
connecting means. The "personal assistant" server, together
with the personal "operator" who makes use of the
35   facilities of the server, is part of the system.
In order to have all relevant data "on hand" when a user
calls, the server is connected to a users database
containing data about the various users, whereby the
server, on detection of a call from a user voice terminal
40   to the voice part of the "personal assistant" terminal,
reads out the data of the calling user from the database
and makes these data available to the data part of the
"personal assistant" terminal. This enables the "operator"
to see on the screen which user is calling as well as the
45   user's relevant personal data. With the aid of these data,
the operator can perform actions on behalf of the calling
user, such as reading the user's e-mail etc., making use of
the user-specific data and settings withdrawn from the
database, namely the "username", "password" and
50   "preferences", which are not shown on the screen but are
used "underwater" for activating the user's e-mail account

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etc. (without the operator being able to read the username
or - in particular - the password). Examples of this will
be given in the working example. The users database can be
connected via the connecting means to user data terminals,
5   thus enabling the users themselves to read or modify their
data.
As mentioned above, a particular object of the present
invention is the support by means of the "personal
assistant" server of the "personal assistant" in voice
10   communication between the (voice) terminal of the user and
the voice part of the terminal of the "personal assistant".
The invention is not, however, as mentioned above, limited
to this: the "personal assistant" server can also, by
providing the "personal assistant" with specific user data
15   and making user-specific settings, offer assistance and
support when the communication between the user and the
"personal assistant" proceeds via their (alphanumeric or
graphic) data terminals. For such data communication as
well, the "personal assistant" server can read out the
20   user-specific data and settings from the database with
reference to the address of the "calling" data terminal of
the user.
As well having access to the personal users data, the
"operator" can also be connected by means of his/her
25   terminal and the "personal assistant" server to internal or
external data systems (or "data-processing systems"), which
can be operated by means of the "personal assistant"
terminal. In many cases, depending on the sort of data
system, the data system is operable by the "personal
30   assistant" with (co-)control by user data of the calling
user called up by the server from the users database. The
data system may, for example, be an e-mail system; it is
clear that the "personal assistant" - for example in reply
to a query by the user to the "personal assistant": "Is
35   there any mail for me?" - can only access that e-mail
system by using user data (from the users database) such as
login name and password of the user in question. The data
system can also be a (personal) diary system (often
integrated with the e-mail system) or an information
40   system, for example a public transport information system
that is consulted by the "personal assistant" at the user's
request ("When is my appointment with Mr. P." or "When does
the first train leave for G."). Other possibilities are an
SMS system, a fax system ("Are there any faxes for me" or a
45   "unified messaging" system ("Have any important messages
arrived?"). Incidentally, it is also envisaged that the
"personal assistant" can also - at the request of the user
- send messages (e-mail, fax, SMS) or make appointments and
enter them in the user's diary, etc. ("Miss A., please send
50   an SMS message to X. to say I will be taking a later
train.").
The invention will now be described in more detail with

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reference to a working example.

EXAMPLES
Figure 1 shows a communication system comprising user voice
terminals 2 operable by users 1 and connecting means,
namely a network 3. Via a switch 4 the user voice terminals
can be connected to a telecommunications network 5. Via
another switch 4 the network 3 can be connected to a (for
example IP based) data network 14. As well as the user
voice terminals 2, the network 3 has connected to it,
amongst other things, a "personal assistant" server 6,
which is connected to a "personal assistant" terminal 7.
This terminal 7 comprises a voice part 10 and a data part
11 and can be operated by a human "personal assistant" (or
"operator") 8 who can be called up by the users via the
connecting means 3 and also vice versa. The "personal
assistant" can also forward telephone calls to telephone
sets etc. connected to the network 5.
The server 6 is connected to a users database 9 containing
data about the various users 1. When a call from a user
voice terminal 2 to the voice part 10 of the "personal
assistant" terminal 7 is detected, the server reads the
data of the calling user from the database and sends it to
the data part 11 of the "personal assistant" terminal 7.
The users database 9 is also connected via the connecting
means 3 to user data terminals 12, enabling the users 1 to
read or modify their data.
The server 6 is additionally connected to various internal
data systems 13 and/or – via a network 14 – to external
data systems 15, which are accessible and operable by the
"personal assistant" 8 by means of the "personal assistant"
terminal 7. These data systems 13 and 15 are operable by
the "personal assistant" 8 by means of the "personal
assistant" terminal 7 with control by user data (data,
settings, parameters) of the calling user 1 called up by
the server 6 from the users database 9. The data system can
be an internal (or external) e-mail system 13 (or 15
respectively), a diary system, an information system, for
example an (external) Internet-based system or an
(internal) intranet-based system. The data system can also
be a Short Message System (SMS), a fax system or a unified
messaging system.
If user 1 calls the "personal assistant" 8 (or more
accurately server 6) via telephone set 2 and network 3, the
extension number of user 1 is forwarded to the "personal
assistant" server 6. On the basis of this extension number
("CLI"), server 6 searches in its database 9 for the
personal data and settings of the user and reads these out.
Some of these personal data – such as the name of the
caller – are sent to screen 11 of the "personal assistant"
terminal 7, while a call signal sounds in the voice part
10. The "personal assistant" 8 can now answer the call in a

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personal manner ("Good afternoon, <user name>, how can I
help you?") with the aid of the data (such as the user
name) displayed on the screen 11. The user 1 can now ask
questions or make requests which can be handled by the
5   assistant with the aid of the personal user data and
settings from the user database 9. For example, the e-mail
address of the user is stored in the database 9 and will be
read out from the database 9 in the event of a call by the
user. The user 1 can now ask the question "Is there mail
10   for me?", to which the assistant, with the aid of the
user's e-mail address - that does not need to be displayed
on the screen 11, can call up the e-mail of the user with a
few simple actions and answer the question. Similarly, the
user can ask the question "How are my shares doing?", which
15   the assistant can answer simply and quickly if the user's
share funds are stored in the personal data and can be read
out in response to a call. Controlled by the read-out
funds, an internal or external data system 13 or 15
respectively, which can provide the requested share prices,
20   is consulted. Another example is the request by user 1 for
the assistant to phone "home" to say that the user 1 will
be coming home later. In this case, the "home" telephone
number is read from the database 9 and either displayed on
the screen 11 and used by the assistant for dialling, or
25   incorporated as (invisible) attribute in a screen object
("Home telephone ") that can be activated by the screen
mouse in order to dial the "home" telephone number and then
to switch through to the user 1. The user can also ask the
"operator" to make an appointment with another person,
30   either by phone or via a shared diary system 13 or 15. For
this as well, the "operator" needs the access codes etc.
for the diary system, which are read out from the database
9. After being made, appointments are entered in the diary
system 13 or 15 respectively, possibly after consultation
35   with the user 1 via the voice part 10.
The users database 9 can, via the connecting means 3, be
accessed and modified by the users 1. To enable the
assistant to provide the user with data from various types
of data systems, the server 6 is connected to various
40   internal data systems 13 and/or external data systems 15,
which can be operated by the assistant 8, making use of
user data of the calling user 1 called up by the server 6
from the users database 9. The data system can, as already
mentioned, be an internal or external e-mail or diary
45   system, an information system based on, for example, the
Internet or intranet, a Short Message System (SMS), a fax
system or a unified messaging system.
In this way, the personal "operator" can, with the aid of
server 6 and servers 13 and 15 operable from server 6,
50   offer a wide range of services to each user 1 individually
in an efficient but nevertheless personal (non-mechanical)
manner.

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It is pointed that the system according to the invention is
based on the deployment of a human "operator" who, with the
support of server 6 and servers 13 and 15, answers the
users and serves them by setting up telephone connections
5 to the network 5, obtaining information and/or performing
tasks, making appointments, sending messages, etc. Although
the system makes use of a human "operator", it is
nevertheless envisaged that some tasks could be taken over
by an "electronic operator", via "voice recognition" and
10 "voice response" (VR), etc. For this purpose it is
envisaged that the server 6 could comprise modules which
record actual dialogues held between the users and the
human "operator" and, based on this input, could be
developed and trained to respond to data for VR.
15 Although the main aim of the present invention is to
improve voice-based communication between the "personal
assistant" 8 and the users 1, the invention is also useful
if the communication is based on data. The "personal
assistant" server 6 can, by offering the "personal
20 assistant" specific user data and making user-specific
settings, also provide assistance and support if the
communication between the user and the "personal assistant"
proceeds via their (alphanumeric or graphic) data terminals
11 or 12 respectively. For such data communication as well,
25 the "personal assistant" server can read out from the
database 9 the user-specific data and settings based on the
address of the "calling" data terminal 12 of the user and
use them in the further interaction with the user.

CLAIMS

1. Communication system comprising user terminals (2,12) operable by users (1) and connecting means (3) for connecting the user terminals to a telecommunications network (5,14), characterised by a "personal assistant" server (6) connected to the connecting means, to which server a "personal assistant" terminal (7) is connected, which can be operated by a human "personal assistant" (8) who can be called up by the users via the connecting means.

2. Communication system according to claim 1, characterised in that the server (6) is connected to a database (9) containing user-specific data and/or settings of the various users (1), whereby the server, on detection of a call from a user terminal (2,12) to the "personal assistant" terminal (7), reads out those user-specific data and/or settings of the calling user from the database.

3. Communication system according to claim 2, characterised in that the users database (9) is connected via the connecting means (3) to user data terminals (12), and the users (1) can read or modify their user-specific data and/or settings.

4. Communication system according to claim 2, whereby the user terminals are voice terminals (2) and the "personal assistant" terminal (7) comprises a voice part (10) and a data part (11), characterised in that the server (6), on detection of a call from a user voice terminal (2) to the voice part (10) of the "personal assistant" terminal (7), reads out the user-specific data and/or settings of the calling user from the database and makes these data available to the data part (11) of the "personal assistant" terminal (7).

5. Communication system according to claim 2, characterised in that the server (6) is connected to one or more internal or external data systems (13,15) which are accessible and operable by the "personal assistant" (8) by means of the "personal assistant" terminal (7).

6. Communication system according to claim 5, characterised in that the data system (13,15) in question is operable by the "personal assistant" (8) by means of the "personal assistant" terminal (7) with control by user-specific data and/or settings of the calling user (1) called up by the server (6) from the users database (9).

7. Communication system according to claim 5, characterised in that the data system (13,15) is an e-mail system that is operable by the "personal assistant" terminal (7) with control by the user-specific data and/or settings.

8. Communication system according to claim 5, characterised in that the data system (13,15) is an electronic diary that is operable by the "personal assistant" terminal (7) with control by the user-specific data and/or settings.

9. Communication system according to claim 5, characterised in that the data system is an information system that is operable by the "personal assistant" terminal (7) with control by the user-specific data and/or
5   settings.
10. Communication system according to claim 5, characterised in that the data system is an SMS system that is operable by the "personal assistant" terminal (7) with control by the user-specific data and/or settings.
10   11. Communication system according to claim 5, characterised in that the data system is a fax system that is operable by the "personal assistant" terminal (7) with control by the user-specific data and/or settings.
12. Communication system according to claim 5,
15   characterised in that the data system is a unified messaging system that is operable by the "personal assistant" terminal (7) with control by the user-specific data and/or settings.
13. Personal assistant server (6) comprising means for
20   making a connection, via connecting means (3), to user terminals (2,12) operable by users (1) and the onward connection of said user terminals to a telecommunications network (5), characterised by means for connecting a personal assistant terminal (7) that can be operated by a
25   human "personal assistant" (8) who can be called up by the users via the connecting means, whereby the server (6) is connected to a users database (9) containing user-specific data and/or settings about the various users (1), whereby the server, on detection of a call from a user terminal
30   (2,12) to the "personal assistant" terminal (7), reads out the data of the calling user from the database.
14. Personal assistant server according to claim 13, characterised by means for connecting the server (6) to one or more internal or external data systems (13,15) which are
35   accessible and operable by the "personal assistant" (8) by means of the "personal assistant" terminal (7), with control by user-specific data and/or settings of the calling user (1) called up by the server (6) from the users database (9).
40   15. Personal assistant server according to claim 13, whereby the user terminals are voice terminals (2) and the "personal assistant" terminal (7) comprises a voice part (10), characterised by means for recording and processing actual dialogues between the voice part (10) of the
45   "personal assistant" terminal (7) and the voice terminal (2) of the user (1).
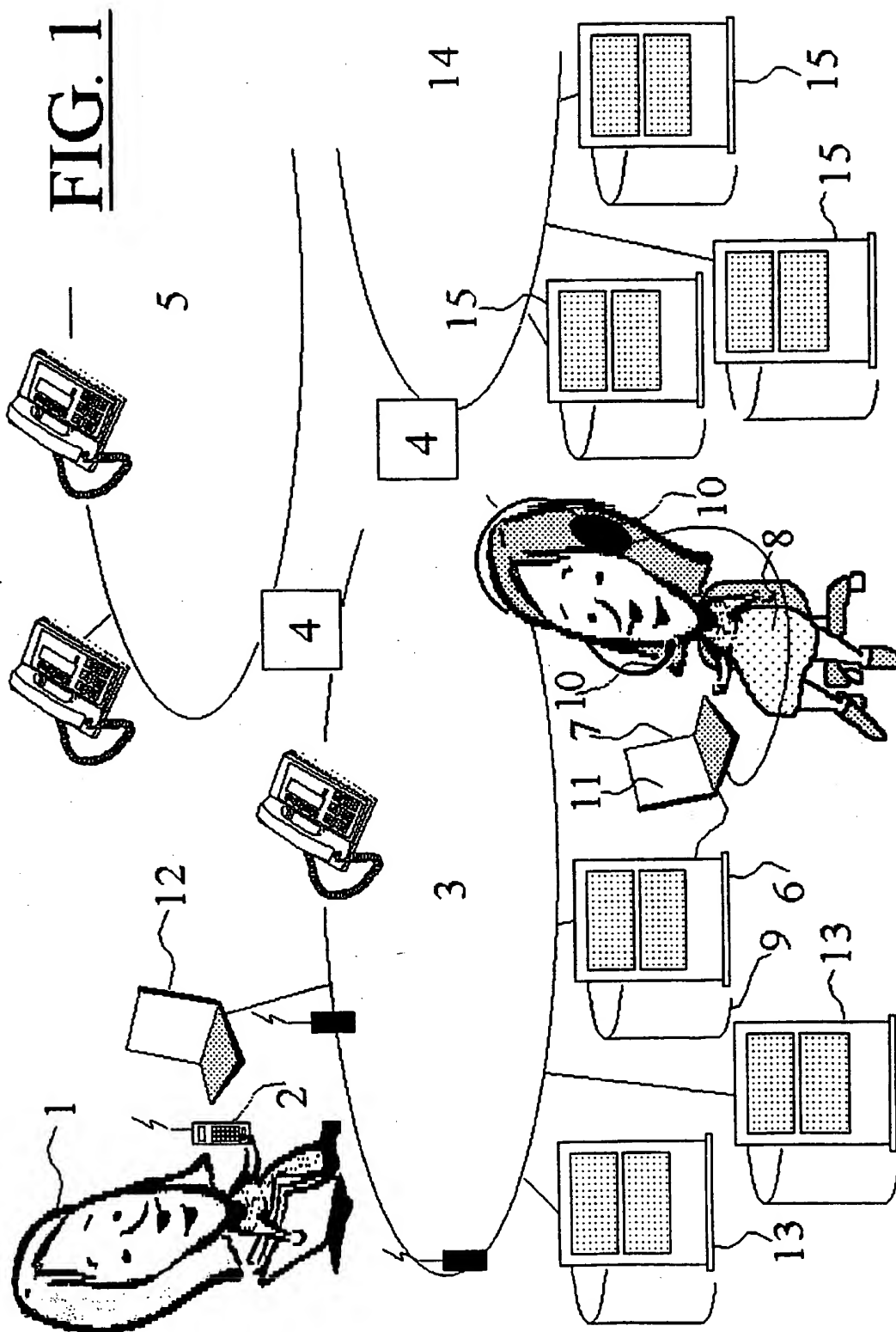
FIG. 1

INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7   H04M3/51   H04M7/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7   H04M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

WPI Data, PAJ, INSPEC, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	R.G. CARR: "5ESSTM Switch ISDN Services" INTERNATIONAL SWITCHING SYMPOSIUM, 15 - 20 March 1987, pages 343-351, XP002156038 PHOENIX ARIZONA US page 347, left-hand column, line 53 -right-hand column, line 40; figure 5 ---	1,2,4,5, 13,14
X	EP 0 026 165 A (ANDERSSON JAN ;PAULSSON KURT (SE); TROK BENIAMIN (SE); SWEDBERG VA) 1 April 1981 (1981-04-01) page 10, line 1 -page 13, line 10 ---	1-3,13

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[X] Further documents are listed in the continuation of box C.

[X]   Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
26 October 2001	02/11/2001

Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Vandevenne, M

Form PCT/ISA/210 (second sheet) (July 1992)

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page 1 of 2

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
X	J.W. TIMKO: "AT&T SYSTEMS ARCHITECTURE" AT&T TECHNOLOGY, vol. 2, no. 3, 1987, pages 4-13, XP002156039 Short Hills US page 11, left-hand column, line 12 -middle column, line 15; figure 5	1,2,13, 14
A	HENRY G. JUD ET AL: "A modern integrated PABX with centralized message recording and remote distribution" NATIONAL TELECOMMUNICATIONS CONFERENCE, vol. 3, 29 November 1981 (1981-11-29) - 3 December 1981 (1981-12-03), pages F.3.3.1-F.3.3.4, XP002156040 NEW ORLEANS US page F.3.3.2	
A	WO 96 11542 A (WILDFIRE COMMUNICATIONS INC) 18 April 1996 (1996-04-18) abstract	

2

INTERNATIONAL SEARCH REPORT

ormation on patent family members

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
EP 0026165	A	01-04-1981	SE	427606 B	18-04-1983
			SE	429082 B	08-08-1983
			AT	7095 T	15-04-1984
			CA	1157552 A1	22-11-1983
			DE	3067450 D1	17-05-1984
			EP	0026165 A1	01-04-1981
			JP	1669163 C	29-05-1992
			JP	3028106 B	18-04-1991
			JP	57111165 A	10-07-1982
			SE	7907914 A	26-03-1981
			US	4529841 A	16-07-1985
			SE	8001267 A	19-08-1981
WO 9611542	A	18-04-1996	US	5652789 A	29-07-1997
			CA	2201298 A1	18-04-1996
			EP	0788704 A2	13-08-1997
			JP	10509847 T	22-09-1998
			WO	9611542 A2	18-04-1996
			US	6047053 A	04-04-2000

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference W0008/7000WO	**FOR FURTHER** **ACTION**	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US 01/ 49596	International filing date *(day/month/year)* 28/12/2001		(Earliest) Priority Date *(day/month/year)* 14/02/2001
Applicant THE WORKPLACE HELPLINE			

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of _____3_____ sheets.

[X] It is also accompanied by a copy of each prior art document cited in this report.

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1. **Basis of the report**

   a. With regard to the **language,** the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

      [ ] the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

   b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

      [ ] contained in the international application in written form.

      [ ] filed together with the international application in computer readable form.

      [ ] furnished subsequently to this Authority in written form.

      [ ] furnished subsequently to this Authority in computer readble form.

      [ ] the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

      [ ] the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. [ ] **Certain claims were found unsearchable** (See Box I).

3. [ ] **Unity of invention is lacking** (see Box II).

4. With regard to the **title,**

   [ ] the text is approved as submitted by the applicant.

   [X] the text has been established by this Authority to read as follows:

   METHOD AND APPARATUS FOR ASSISTING WORKPLACE SERVICES AND PRODUCTS

5. With regard to the **abstract,**

   [X] the text is approved as submitted by the applicant.

   [ ] the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.   1

   [X] as suggested by the applicant.   [ ] None of the figures.

   [ ] because the applicant failed to suggest a figure.

   [ ] because this figure better characterizes the invention.

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7   G06F17/60   G06F9/44

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7   G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 983 369 A (BAKOGLU BRIAN ET AL) 9 November 1999 (1999-11-09) column 1, line 18 -column 13, line 35	1-11, 17-27, 33,34,39
Y		12-16, 28-32, 35-38
Y	WO 00 74193 A (NOWONDER INC) 7 December 2000 (2000-12-07) page 3 -page 7	12-16, 28-32, 34-38
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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

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"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
9 August 2002	19/08/2002

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Huber, A

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
Y	ACKERMANN ET AL: "Answer Garden 2: Merging Organizational Memory with Collaborative Help" , CSCW '96. PROCEEDINGS OF THE ACM 1996 CONFERENCE ON COMPUTER SUPPORTEDCOOPERATIVE WORK. BOSTON, NOV. 16 - 20, 1996, ACM CONFERENCE ON COMPUTER SUPPORTED COOPERATIVE WORK, NEW YORK,NY: ACM, US, PAGE(S) 97-105 XP002102511 ISBN: 0-89791-765-0 the whole document	12-16, 28-32, 34-38
X	US 5 806 043 A (TOADER ADRIAN) 8 September 1998 (1998-09-08)	1-3,9, 15, 17-19, 25,31, 33-35,39
	column 2 -column 6; figure 1	
X	EP 0 952 539 A (NORTEL NETWORKS CORP) 27 October 1999 (1999-10-27)	1,2, 9-11,17, 18, 23-25, 33,34,39
	column 2 -column 3; figures 3,4	
P,X	WO 01 86928 A (KARDOL JOHANNES JAN ;AASMAN JANNES (NL); KONINKL KPN NV (NL); KALB) 15 November 2001 (2001-11-15)	1-3,9, 17-19, 25, 33-35,39
	the whole document	

4

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 5983369	A	09-11-1999	AU	3372997 A	07-01-1998
			WO	9749030 A1	24-12-1997
WO 0074193	A	07-12-2000	AU	5296500 A	18-12-2000
			EP	1190475 A1	27-03-2002
			WO	0074193 A1	07-12-2000
US 5806043	A	08-09-1998	US	5774869 A	30-06-1998
			AU	6029296 A	24-12-1996
			CA	2223787 A1	12-12-1996
			WO	9639668 A1	12-12-1996
			US	5749075 A	05-05-1998
EP 0952539	A	27-10-1999	US	6101486 A	08-08-2000
			EP	0952539 A2	27-10-1999
WO 0186928	A	15-11-2001	NL	1015165 C2	13-11-2001
			AU	6595401 A	20-11-2001
			WO	0186928 A1	15-11-2001